

OLDEST BEE PAPER IN AMERICA

# THE WEEKLY BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS.

ESTABLISHED IN 1861.

Chicago, Ill., June 25, 1884.

VOL. XX.—No. 26.

## THE WEEKLY EDITION

OF  
**THE AMERICAN BEE JOURNAL**

PUBLISHED BY

**THOMAS G. NEWMAN,**  
EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

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**THOMAS G. NEWMAN,**

925 West Madison Street., Chicago, Ill.

## Topics Presented in this Number.

Bees are Busy .....	411
Building up Colonies in the Spring .....	407
Call Things by their Right Names .....	404
Chickens and Bees .....	412
Convention Hand-Book .....	413
Correspondence .....	405
Dociility of Cyprian & Syrian Bees .....	403
Dociility of Syrian Bees .....	409
Editorial Items .....	403
Heavy Bloom .....	411
Honey and Beeswax Market .....	412
Honey and Digestion .....	403
Increased Experience .....	411
Introducing Virgin Queens .....	407
Local Convention Directory .....	412
Overstocking a Locality .....	410
Prevention of Bee-Diarrhoea .....	409
Prevention of Swarming .....	412
Profitable use of Comb Foundation .....	409
Putting Honey on the Market .....	404
Queen Rearing .....	411
Reversing the Frames .....	412
Selections from Our Letter Box .....	411
Special Notices .....	413
Swarm Separators .....	411
The Bees are Swarming .....	405
The Honey Season in Cuba .....	403
The Principles of Protection .....	406
The Season in England .....	404
Transferring Bees .....	412
Unripe Extracted Honey .....	411
Use of Comb Foundation .....	411
Use of Honey from Diseased Bees .....	412
Very Small Bees .....	412
What and How .....	412
What do we Know? .....	411
Wintering—Bee-Diarrhoea .....	408
Wintering Bees in Cellars .....	408
Winter of 1883-1884 .....	405

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# Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX.

CHICAGO, ILL., JUNE 25, 1884.

No. 26.

## THE AMERICAN BEE-JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,  
EDITOR AND PROPRIETOR.

### Honey and Digestion.

"All foods," says an exchange, "if not already soluble (meltable) in water, have to be so altered within us that they become dissolved, and we call this solution, digestion. Starch, for example, which forms five-sixths of our daily bread, is utterly ineffectual to use while it remains as starch, because of its insolubility; but in the act of chewing, the saliva which we add to our bread begins to convert the starch into a sugar (very much like to the sugar of honey), and so renders it soluble in order that it may in due course be carried into our blood, and there do the work of giving us power or heat. Cane sugar, in like manner, although soluble, requires alteration, and this alteration is also brought about by contact with the saliva, and the result is a sugar, as in a previous case, nearly identical with the sugar of honey. Honey, on the contrary, or the sugar that we find in grapes, is *already* in the condition for absorption or assimilation, and really no kind of work has to be performed upon it before it is actually rendering us service as a force, or heat-producer." Honey is, therefore, given to mankind, in the most agreeable form, both for food and medicine. It produces healthy digestion, and holds defiantly that monster of torture, indigestion, at bay. Pure honey should be used freely in every family. Honey eaten upon wheat bread is very beneficial to health.

Children would rather eat bread and honey than bread and butter; one pound of honey will reach as far as two pounds of butter, and has, besides, the advantage that it is far

more healthy and pleasant to the taste, and always remains good, while butter soon becomes rancid and often produces cramp in the stomach, eructations, sourness, vomiting and diarrhoea.

Digestion (all-potent in its effects on the mind as well as the body) depends largely on the food. Poor food received into a poor stomach is the cause of many unhappy homes—while good, healthy food, received into a healthy stomach, becomes "an Angel of Peace" to many a household.

### Docility of Cyprian and Syrian Bees.

A correspondent in the *London Journal of Horticulture*, when writing about controlling Cyprian and Syrian bees with smoke, remarks that they cannot even *smell* it or be jarred without making them irritable. If they are kept from smoke and handled gently, and the hives are opened only when the sun shines, he claims that they are perfectly docile and gentle; and that those who have found occasion to condemn them on account of their irritability, have been dosing them with smoke or handling them without care. As proof that his theory is correct, he says that "Mr. Benton in Cyprus had 500 colonies placed round his house, on the veranda, or anywhere where they could stand. One hive in particular was so placed that it had to be passed within 2 feet from the entrance scores of times each day by every visitor or inmate; and though Mr. Benton was working amongst them from early morning to late at night with no protection whatever, save a hat, shirt, pants, and slippers, no one was ever stung, and he very rarely. We have Mr. Blow's authority for saying that he saw Mr. Benton open hive after hive without veil or gloves, and none ventured to sting." Possibly this may account for the many conflicting opinions given by our American correspondents relative to the Cyprian and Syrian bees, and their irascibility.

Let some who have these bees in their purity, try it and report the result.

This writer approves of the crossing of Cyprian queens by Syrian drones, and then says that "it is only by crossing these foreign bees that we may hope to produce superior varieties. It has been done in every other branch of the animal and vegetable kingdoms, and why not with bees? for with all their virtues—which should make us more anxious to improve them—they are only wild bees we are cultivating at present. Cyprus gave us the cauliflower, and who would recognize the original in the immense varieties of broccoli and cauliflower, or would banish it from our gardens? And may not one or all of these bees produce a breed of bees as distinct and valuable to the present as the *Magnum Bonum* potato is to its first parents? Let us go about this matter in an intelligent manner, each adding his mite; and for the present those who want a good crop of honey and plenty of bees in the spring to fertilize their abundant fruit blossom, I would advise such to try the first cross of Syrians with pure black drones." With this idea in view, "crossing" is now being done largely in America in the hope of producing "the best bees in the world."

### The Honey Season in Cuba.

Mr. A. W. Osburn, S. Miguel, Cuba, W. I., writes thus on June 14, 1884:

We are in the midst of our wet season. The wet season here differs from anything of the kind I have ever seen in any country. It is a succession of showers, then bright sunshine, and then more showers and more sunshine. And, of course, as this is a tropical climate, the rain is warm, and vegetation of all kinds grows wonderfully fast. The flowers thrive and bloom; thus furnishing plenty of feed for the bees; but the honey flow is not extravagant, the honey is not light in color, and its flavor is fair. After being here 9 months, I conclude that the main honey harvest is in the winter months, and then it is a harvest indeed, by far excelling anything I ever witnessed in any country.

### Call Things by their Right Names.

Some time since Mr. D. K. Boutelle sent us the following criticism on this subject:

I was much interested in the Editor's remarks under the above caption in the BEE JOURNAL of Nov. 28, 1883. In his treatment of such expressions, as he "wintered" his "stands in the cellar," "they came out in bad shape," etc., he indicates clearly that, so far as possible, we ought to use terms or words in such a way as to correspond with their usual or dictionary definitions.

This, I think, is right, and that it is an important point to consider in establishing nomenclatures for apiculture. When we have anything so new that there is no convenient term to express it, then it will be time to coin a new name; but do not let us attempt to apply new definitions to old words. If it is done, it seems to me it would tend to confuse.

While we are about it, is it not better to adopt a vocabulary of bee-keeping terms, somewhat in harmony with a standard dictionary rather than in violation of it? With this idea in mind, I wish to offer a little friendly criticism on two of the terms put forward by the Editor.

He says: "A colony of bees is an organized body of bees," etc., "improperly called a swarm," etc. Webster defines colony thus: "A company or body of people transplanted from their mother country to a remote province or country, remaining subject to the mother country." This definition of the word colony is fully explained in Johnson's cyclopedia. It says: "The settlements of the barbarians who destroyed the Roman Empire were not colonies, for the tribes were not connected with any parent State."

Now, in what one particular does a body of bees which emigrates from a parent hive, and becomes settled in another hive, correspond with these definitions of colony? Not one; unless it be that bees may be called a people. They are certainly under no allegiance to, or protection by, and have no connection with the parent hive or body. The term colony, seems to me, is about as inappropriate a name as could well be applied to them.

Again, he defines "swarm of bees" thus: "Bees issuing from the parent colony for the purpose of increase." 1. Does the purpose for which bees issue from a hive make a swarm of them; or would they be a swarm all the same if they swarmed out for some other reason than increase, as they sometimes do? 2. Webster defines swarm in this way: 1. "A large number of small animals or insects, especially when in motion." 2. Any great number or multitude. 3. A body of bees that emigrate from a hive at once; or a like body of bees united and settled permanently in a hive."

Here then, it seems, is a name that, so far as dictionary-meaning is concerned, is perfectly appropriate for a body of bees which inhabit a hive; and one, too, that has long been in

use. There may be reasons why some other term may be more convenient for bee-keepers. The word being used also as a verb may be thought to be liable to confuse; but does not the use of proper articles sufficiently indicate when it is used as a noun? To me, *swarm* seems far preferable to *colony*.

What, then, shall bee-keepers adopt as a convenient and appropriate name for a family of bees? I do not know. Let all bee-keepers suggest until we find the right or best one. If our language does not contain a word more appropriate than colony, then let us make one. As my suggestion, I would say, family; if there is no better. What are the objections to it? and who will offer a better?

I wish we had a truer name for the mother of a family of bees, than "queen." She is no queen in any true sense of that word. She is neither the wife of a king nor the ruler of a people. She is simply the mother-bee, and I wish that were her usual appellation.

Lake City, Minn.

Mr. Boutelle's desire for the word "mother" to supersede the word "queen," is quite reasonable. The mother bee is not a queen; but a difficulty is encountered at the very start, by the fact that two words are needed instead of one. The word "bee" is a necessary adjunct, making the name "mother bee" which is long and rather objectionable on that account. The word "queen" is more elegant as well as more ancient.

But on the use of the words "colony" and "swarm," we beg to differ from him. Personally we do not like the word "family" as a name for an organized body of bees. The "mixing up" which is so often occasioned by using these words interchangeably, is apparent in the necessity of saying the "old swarm," the "new swarm," the "parent swarm," or the "swarm that gave off a swarm," etc. In the foregoing, our correspondent realized the difficulty, and in the 9th line of the 5th paragraph, he used the words "parent hive." The hive is the box containing the bees—was the box the parent or mother of the bees? Such an idea is too absurd for even a passing thought.

We are hopeful that the new "Dictionary of Apiculture," by Prof. Phin, will greatly assist in the use of correct terms by apicultural writers.

We regret to announce that the Rev. L. L. Langstroth is still suffering from his old malady, at his home in Oxford, Ohio. The sympathy of thousands of bee-keepers all over the World are with him in his affliction.

### The Season in England.

A correspondent of a London paper gives the following description of the season in England, with reference to the Bee and Honey interests:

So far this year the bees have had a hard struggle to exist. The year opened favorably on them with less mortality than ever I experienced. Large patches of brood were in every hive during January, and breeding was unremittingly carried on throughout the cold winds of that month. Many young bees were flying in February. Flowers and sunshine came with March, and good colonies collected much pollen from the crocuses, willows, tussilago, etc. Many colonies were then advancing rapidly, and were well forward, promising early swarms. April we welcomed, but it brought thunder, snow, and frost of unusual severity—bleak cold weather, with scarcely a ray of sunshine to gladden us. This lasted until May 23. Flowers had almost disappeared; those not destroyed looked sickly, and dead bees strewn on every path. Colonies that looked like swarming seven weeks ago, have made no progress, while many that by this time, with mild weather, would have been strong, are so reduced in bees that they will be unable to do more than keep themselves alive. Our locality is, however, not a sheltered one; there is a paucity of trees in the district, arising through proprietors of small estates cutting down every tree that can be turned into cash, and the ground they occupied made available for cultivation.

### Putting Honey on the Market.

In one of our exchanges we notice the following on marketing honey:

Many bee-keepers err in putting their honey upon the market too early in the season and at too low a price. After reading a few encouraging reports in the bee-papers, they fear that there will be a glut in the honey market, and, in their efforts to secure the highest price by rushing their honey into the market before there is a demand for it, they often get the lowest price and help to spoil the market for others. Until the fruit season closes, the demand for honey is light, and bee-keepers should govern themselves accordingly. The honey should be well graded, put up in the most attractive packages possible, well taken care of, and placed on the market when there is a demand at a remunerative price, and not before.

This "advice is good and timely," and we hope will be heeded by the inexperienced, so as not to spoil the market for their more experienced neighbors. The markets are now bare of comb honey, and the demand will be good, and prices fair for the first marketed. Do not rush too much on the early market to spoil it.



# CORRESPONDENCE

For the American Bee Journal.

## The Bees are Swarming.

ALICE WAVERLEY.

"Hurrah! hurrah!" came the father's voice,  
From the onion-bed down by the pens,  
"The bees! they are swarming! so hurry out quick;  
Hurrah! don't you hear them—the bees?"

"Now, where's my old bucket, and where is my  
stick,  
And what makes ye all so slow?  
If ye don't hurry out and rattle them quick,  
They'll be off to the woods, I know."

There's a hurry and scamper for bonnets and hats,  
A looking for kettles and tins.  
Then out we'll all go, and stand in a row,  
All ready to rattle them in.

Mother stands under the round apple tree.  
The fire-shovel and poker are doing their best;  
She must keep well out of the reach of those bees,  
Or a swelled face, for days, to their skill would  
attest.

Father stands under another old tree,  
His face well hid in its sheltering leaves;  
While he hammers away with bucket and stick—  
He's doing his duty in settling the bees.

From the back of the vineyard there comes a faint  
sound,  
Like the tinkling notes of some far away bell,  
'Tis only the echo of Maggie's tin pan—  
She cannot get stung, I think, very well.

"Kit has a milk-pan, wide over and roomy;  
But it sends out a very good sound" for a that."  
And should the bees gather too near for good  
manners,  
This pan serves the place of a shield, or a hat.

Fannie goes fitting now here, and now there,  
Down through the vineyard, then over the fence;  
Through uncle Jim's garden she treads with great  
care—  
If they don't get away, she'll make fifty cents.

"Tum-dum, tum-dum!" goes the stick on the  
bucket.  
This "old oaken bucket" serves for bass in the play.  
"Ting-a-ling-ling," goes Fannie's old pendulum  
now,  
As with the wire poker she hammers away.

Well, well! after spending an hour, or so,  
In climbing, and jumping and skipping around,  
Going backward and forward, then in, and then  
out—  
They're now going to settle, I think, by the sound.

There! now they have lit on a tall apple tree,  
And some one must hurry the ladder to get;  
And the barrel and board, with the watering-can,  
The smoker, the feathers, the hat with the net.

Outside of the fence stand our cousins and neigh-  
bors,  
For "distance lends charms" when the bees are  
about,  
And no one is anxious to get very near them,  
For fear some stray skirmisher might find them out.

"Now Fannie!" calls father from under the tree,  
"You take up my grape-hoe and give them a shake.  
When I call out ready, you just pull away,  
And short work we'll out of them make."

"All ready!" a shake, and—"run, Daddy, run!"  
For the bees fall on him, instead of the hive;  
A moment's confusion, but no one was hurt,  
And straight for the branch with the Queen do  
they dive.

"Ah, sure, we must try some other new plan—  
We never can shake them down, I see.  
Some one must saw those branches off,  
So I'll take the ladder, and climb the tree."

Down came the branches one by one,  
Up go the bees as the branches fall.  
"Now, if we don't try some other way,  
We never can have these bees at all."

In the midst of our flurry, home comes John—  
Runs up the tree—quick as a flash, you know;  
Cuts off the branches, and carries them down,  
Straight into the hive every bee will now go.

At last they're all in and the racket is over;  
And the hive is put down in a row with the rest.  
Like the lull after storm, our excitement has ended,  
And each one thinks—"I was the one who did best."  
—Macomb, Ills.

For the American Bee Journal.

## Winter of 1883-1884.

JAMES HEDDON.

Last autumn I found that my home  
apiary contained 336 colonies of bees.  
Most of these colonies had been  
worked, during the preceding season,  
upon a plan adopting some new meth-  
ods destined to bring them out at the  
close of the season with as little  
honey and bee-bread in their combs  
as possible. Though the season  
closed very much against such a re-  
sult, still our hearts were gladdened to  
find on an average not half the usual  
amount of either.

The honey was stored above, and  
the pollen not at all. To these colo-  
nies we fed 11 pounds of granulated  
sugar made into syrup, which made  
on an average about 10 pounds to each  
colony, as about 70 colonies received  
none at all. The ones which were  
fed, received on an average of about  
12 pounds each. We wintered them  
out-of-doors, both with and without  
protection, and about 30 colonies in  
the cellar. All except about 12 colo-  
nies of those out-of-doors were packed.

When all were prepared, I said to  
the assistants, "Now, for the first  
time in my life, I hope for a trying  
winter for bees." Well, in fact, we  
had such a winter. The confinement  
was not very long, but the cold  
weather was quite steady and severe.  
Judging from 15 years of experience  
and observation, I should have ex-  
pected a loss of at least one-half of all  
my colonies had the usual amount of  
pollen and honey alone constituted  
their winter stores. Such, however,  
were not the condition of the colonies.  
Even those which were not fed or  
specially manipulated during the pre-  
ceding honey season, had less bee-  
bread than usual; and those which  
were fed, I think I am safe in saying,  
had not one-fourth as much bee-bread  
as the others. I lost about 30 colonies  
by diarrhoea; but I think none in the  
cellar had it.

Taking the reports of all, I think  
statistics show that cellar wintering  
is the safest method. It is clear to  
me that when cold is the greater auxil-  
iary to the cause of diarrhoea, bees in  
cellars come out best; but when con-  
finement is its special aid, then out-  
door wintering is ahead.

We prepared 45 colonies without a  
cell of pollen; and about 25 of them  
without one drop of honey, while  
the other 20 had practically none or  
only a little in the out-corners of an  
occasional comb. These 45 colonies  
we fed liberally with the sugar syrup.  
During the examinations in early  
spring, the first cover I raised, my  
assistant exclaimed, "O! what little  
lean looking things!" We had pre-  
viously been overhauling a few sick  
colonies, and many in comparatively  
good condition; but all whose hives  
contained mostly natural stores, had  
distended bodies. Did I say all the  
45 wintered well? No, they did not.  
All were in perfect condition except  
one, which died—and that died with  
diarrhoea. As I raised the cover, I  
said to my foreman who superintended

the fall feeding under my directions,  
"Here is one of our non-pollen colo-  
nies dead; and died with diarrhoea as  
sure as you are born." I lifted a comb  
from near the centre of the cluster,  
and up came a little brood and a  
comb nearly half full of bee-bread.  
"Why! what is this?" said I. "O!  
this is my fault, Mr. Heddon," said  
the foreman. "I remember that in  
this one hive the queen bred very late  
in the fall, and this comb had a patch  
of sealed brood nearly as large as my  
hand, which I left to hatch out, de-  
termined to remove it in a few days,  
which I forgot to do."

The above are a few of the facts re-  
garding last winter's experiments and  
the results, as witnessed by myself  
and my foreman, Mr. William Stolley.

We are so well convinced of the  
correctness of the pollen theory; i. e.,  
that floating pollen in the honey or  
bee-bread, or both, if consumed dur-  
ing confinement, is the direct cause  
of bee-diarrhoea, that we are laying  
our plans to henceforth prepare our  
bees for winter in accordance with  
that theory. As the reader will natu-  
rally suppose, after the discovery of  
certain facts, causing disease, and  
consequent methods of prevention,  
comes the best, cheapest and most  
practical methods of bringing about  
preventive conditions.

This we are and have been, for the  
past year, studying and also experi-  
menting upon. That bee-culture of  
the future, which will not move off  
readily and practically with a busi-  
ness-like speed, will be forced to suc-  
cumb to the survival of that which  
will. We do not propose to dig the  
bee-bread from the cells with tooth  
picks; we do not propose to remove  
it by removing the combs containing  
it; but we do propose to prevent its  
being stored in any considerable or  
dangerous quantity. Again, we do  
not propose to extract natural stores  
after the flow of honey has passed;  
but we do propose to prevent the ex-  
istence of stored brood-chambers at  
the end of each year's honey flow.

That it can be done, we have ex-  
perimented enough to become con-  
vinced. The next question in the  
wintering problem, will be: "Now  
that I can winter my bees with suc-  
cess, how can I do it with the least  
capital and labor?" We have ideas  
which we believe are correct regarding  
these points, which we shall write  
upon in the future.

The reason why I have delayed this  
report is, that I might be able to re-  
port the standing of these colonies  
which could not and did not hatch an  
egg till they gathered the pollen of  
1884; while some other colonies be-  
gan breeding in February. My fore-  
man and students have examined  
them carefully, and report that if any  
difference can be detected between  
them and the other colonies which be-  
gan to breed nearly two months  
earlier, is, that these conservative  
ones are now the strongest in bees  
and brood. This is just what I should  
expect.

I have for several years claimed,  
against the clamor of our ever-present  
corps of inexperienced apicultural

writers, that "spring dwindling" is "diarrhoea in disguise;" that no apiary would ever suffer from it if the colonies were well wintered. Our opposition accredited it to disagreeable spring weather, cold winds and shady dells. Here they made the same kind of a mistake that they have made regarding the true cause of diarrhoea. Their supposed prime cause are only helpers or secondary causes.

The present spring has been one of the most trying as far as bad weather being a cause of "dwindling"; but throughout all the regions where bees wintered well, no "dwindling" has occurred. I have looked upon this wintering-problem without prejudice, and I have little reason to entertain any. I am more fully persuaded that the "pollen theory" is the correct one. I will not take more space to describe the various plans of packing and ventilation used in this apiary during the past winter, as none of them, or the lack of them, prove to be a cause or a prevention of diarrhoea.

The other apiary was not mine till last March. Years ago sugar was found to be a much better winter food than honey. The reason why it was such, was not understood. Had it been clearly known, sugar, as a winter food, would not have been discarded; because, in some cases where it was fed, the bees died of diarrhoea by eating the bee-bread from the cells adjoining those containing the syrup.

Dowagiac, Mich., June 9, 1884.

Read at the Maine State Convention.

### The Principles of Protection.

L. F. ABBOTT.

No one need get fidgety; it is not based on the political bearing of tariff protection, as the first thought might naturally suggest. I am a believer in protection, however, in every sense of the word, and especially where the rights of the farmer or the farmer's bees are concerned—the latter of which more directly concerns us at the present time. It is not my purpose to discuss each point exhaustively, but rather to introduce propositions which seem to me to be established as facts, and leave the discussion of the various points to wiser, if not older, heads.

Proposition 1:—"The meaning of 'protection.' Not to be too critical, we will declare it to be, guarding against extremes of temperature both in winter and summer. Protection may be afforded in various ways at both seasons, but all forms may not be equally efficacious in accomplishing the desired end. We may use single-walled hives loosely constructed, for our bees, then leave them out-of-doors through the winter months, placing a few evergreen boughs or corn-stalks around the hives, and call it "protection;" and it would be, but I think not the best kind. We can also use such hives as I have named, and place the bees in a

good cellar, and call that "protection;" and this I have often done with good results; but neither of these ways, I am convinced, is the right kind of protection for bees.

Protection then, is something more than guarding against cold; it protects from cold, from humidity, from sudden changes induced by atmospheric influence, and also prevents the production and retention of deleterious gases and other influences incident to non-ventilation.

Proposition 2:—"Why is protection necessary?" Our bees are subject to unnatural conditions in the frame hive. To explain: Bees left to follow their own course seldom fill the hive with uniform straight combs. This change has been brought about by the skill of the apiarist. Bees in a natural state never had wired foundation, running from front to rear of the hive, in beautiful and exact sheets upon which these little insects could continue the work so deftly begun and left by the comb-foundation machine. A hive without bars or frames, occupied by bees, will, as a rule, be filled with combs of many forms, placed irregularly, some running at right angles with others, forming nooks, corners and galleries where the bees can find ample room to cluster in during the winter, and thus find protection from their mode of filling the hives with combs, which instinct leads them to adopt. On the other hand, the higher intelligence of man comes in and directs the work of the bees that now produce perfectly straight and true combs, subject to cold drafts of air from the entrance up through the narrowly spaced frames, and out by the loose joints of illy-constructed hives. Protection, then, is needed to restore the equilibrium destroyed by this abnormal condition to which our bees are subjected by the advances, of what is esteemed, apicultural science.

Proposition 3:—"Protection essential in both out-door and in-door wintering." It is certainly necessary to protect from cold and sudden changes of weather when bees are left out-of-doors, and I hold it is no less the part of wisdom to give nearly the same protection when wintered within doors. In either case, condensation of moisture within the hive will take place—out-of-doors to form frost within the hive, and in-doors to saturate the unpainted walls and frames of the hive and form in drops upon the combs, causing dampness and mold. The colder the hive, the more serious the trouble, in either case. Protection, as with the chaff hive, obviates both difficulties to a certain extent, both by preventing excessive condensation, and again by allowing the moisture to escape, and also by absorption. An example: A colony placed in the cellar, with enameled cloth on the frames with absorbents on top of that, in January were found with moldy combs, the enameled cloth on the side next the frames was covered with drops of water over its whole surface so it dripped when removed, and but little indication of absorption of moisture above the en-

ameled cloth. Another colony placed beside the former, with woolen cloth placed upon frames and bran-sacks above that, was found with the upper story of the hive and the inside of the cover, covered with drops of water, with the packing-material damp, while the quilt was dry and warm. The same state of things would exist in case of out-door wintering, with the exception that frost would collect unless more material was used to absorb the moisture. Protection, then, is needed to preserve an even temperature and a normal condition of dryness within the hive.

Proposition 4: "Bees, to winter safely out-of-doors, should be protected as with the chaff hive, or on the plan of Mr. Additon's shingle hive, or by packing in some manner, if in single-walled hives." If wintered in the cellar, full protection is well; but protection above the bees by some absorbing material, as chaff, finely-cut straw, or cloth, is fully as essential as in out-door wintering.

Proposition 5:—"Protection is the normal condition of bees in the natural state." Bees left to seek their own home, as a rule, seek a hollow tree. There they are in a single-walled hive, it is true, but not a thin-walled hive. But the conditions for disposing of the moisture arising from the bees is generally admirable. The hollow tree, made so by the decaying of its substance, is still subject to the same process of decay, while the bees are snugly ensconced within its dry and warm shelter. The first work of the swarm after domiciled in their new home, is to set up house-keeping by thoroughly clearing their apartment. This they commence to do at the top, but there is always a portion of the upper part of the cavity to which the combs are not attached; and this for the reason that the decayed wood is not easily removed, and still deemed by the bees insecure to fasten their combs to. This partially decayed portion above the combs affords fine absorbing material in winter, being as dry as powder in the fall when going into winter quarters, and in spring, wet with the condensed moisture absorbed during the cold weather. Such being the natural conditions, our artificial devices should be as adequate and as much better as possible; hence protection is a necessity, to a certain extent, under all circumstances, in supplying natural conditions.

Proposition 6:—"Protection is needed in summer to guard against excessive heat." There is no doubt in my mind but that many times bees refrain from entering the surplus boxes, and cluster upon the outside of the hive, solely from the effects of the excessive heat within the upper portion of the hive. This I saw demonstrated last season, and have seen frequent cases before. An empty space above the section-case in the upper story of the hive, affords some relief; but I think some non-conducting material above the bees, immediately above the sections when they are on, or over the frames in spring and early summer, quite essential.



For the American Bee Journal.

**Introducing Virgin Queens.**

G. M. DOOLITTLE.

Formerly it was considered that virgin queens could not be introduced, to any advantage; and from this reason a queen-cell was always given to a queenless colony, unless a laying queen was at hand. In case no queen-cell was ready for use, brood was given to the queenless colony or nucleus, from which they would rear a queen. As it takes them from 12 to 16 days to rear a queen from this brood, a gain was made by having queen-cells constantly on hand, with which to supply the nuclei.

As a queen-cell was liable to be destroyed if given to a nucleus or colony as soon as the laying queen was removed, it was found best to wait 48 hours before giving such a cell; and as the cell would not always be ready to hatch as soon as given, the time elapsing before it would hatch, would, on an average, be about 2 days more; so that a gain of only about 8 to 10 days was all we would get by using the cells instead of the brood. Some tell us of inserting the queen-cells as soon as a laying queen is removed; but the fact that many of our best apiculturists entirely fail with that method, proves that such a procedure is very uncertain, to say the least.

After the young queen emerges from her cell, the average time before she commences to lay is about 10 days; so the colony must be without a laying queen 14 days when a cell is used in re-queening; or from 22 to 24 days where brood is used. As 24 days represent about so many 1,000 bees with a laying queen in the hive, it will be seen that the old way of giving brood is decidedly "too slow," and that of the cell-plan much too slow. For this reason it became a desirable object, especially to the queen-breeder to introduce a virgin queen as soon as a laying one is taken from the nucleus; thus making a gain of time to the breeder, and also keeping the nucleus constantly supplied with brood. With this desirable object in view, many plans were tried, and as a result it was soon heralded in the bee-publications, that if virgin queens could be given as soon as they were hatched from the cell, they would be accepted, as a rule, wherever put, if there was no queen in the hive; some asserting that they had no trouble in putting them in at the same time they took the laying queen out.

After trying the plan (all others being given up to within about two years ago, and after losing 19 out of every 20 queens so tried), I became discouraged, and went back to the cell-plan. Some of those I did get to laying, would be so crippled by the bees hugging them, that they would be of little use; and soon had to be killed on account of their legs being paralyzed so that they would fall off the combs, or otherwise being incapable of being a good queen.

About this time I had a lot of very nice cells reared by natural swarming, on which I "lotted" very much

for choice queens. The day before these cells were ready to be removed from the hive, a second swarm issued from a colony on the opposite side of the apiary. As I was about to secure the cluster and return it to the old hive, I happened to see the queen which was a very nice one; and being short of queens, I thought I would cut off a part of the cluster with the queen, and put them in a nucleus hive, thus securing a valuable queen, as I had reason to think there were two queens with the swarm. Having secured the queen and about a pint of bees in my swarming basket, I returned the rest of the swarm.

After they were all in the hive, I prepared the nucleus hive and placed the pint of bees in front of it. As they were entering, the young queen took wing, and fearing she might return to the old hive, I placed a sheet over it. Soon after, the bees were all in the nucleus hive; they commenced running all over it, thus showing that they were queenless. So I got a frame of unsealed brood and gave it to them to keep them from going back, supposing that the young queen had gotten back to the old hive before I covered them with the sheet. By keeping these bees I would have a good nucleus for my queen-cells, I thought, as I had more cells than nuclei to receive them. The next day as I went to get the nice lot of cells, you can imagine my surprise and chagrin when I found them all destroyed. After a little examination, I soon discovered the very same queen which had flown away from my little swarm of bees the day before.

After pocketing the loss of 25 as nice queen-cells as I ever saw, I began thinking how it was that after trying for years to introduce virgin queens, and failing, that this one should be received. The only solution I could make of it was, that these bees had been queenless so long that they expected their cells to hatch, and so they took this queen as one hatched from their own cells.

From this I went to experimenting till I ascertained that 9 out of every 10 virgin queens would be accepted if placed into a colony after the first queen-cells were sealed; while 9 out of 10 would be killed if given to the colony before the bees had sealed the cells. I also found, as a rule, that the first queen-cells would be sealed five days after the nucleus was made queenless; and from this knowledge I was enabled to introduce virgin queens with little risk of having them killed.

It will be noted that if I should give a colony a queen which had just emerged from the cell at this time, that I was one day behind the time gained by the cell-method; but if the queen given was 7 or 8 days old, she would be laying in 2 or 3 days now, which would give me a gain of a week, over the cells. Accordingly I made a queen nursery, after the directions given in Alley's book, in which the cells were placed to hatch; and the young queens kept there until old enough to be used to the best advantage. When old enough, and

the nucleus was in the right condition, these queens were taken from the nursery, then daubed with honey and dropped on top of the frames of the hive. The next day the queen-cells would be destroyed, and in 2 or 3 days more the queen would be laying.

As I said before, this would work about nine times out of ten. This season I experimented farther, not being satisfied with losing one out of ten; and instead of waiting five days before giving the virgin queen to the colony, I placed her in a provisioned, wire-cloth queen-cage; and when she was 4 or 5 days old, I placed the cage over the cluster of a colony after it had been queenless but two days. She was then left for 3 days, when, upon opening the cage, she was allowed to run down among the bees.

In this way I have succeeded every time. I have opened the hive within ten minutes after releasing the queen, and found her on the queen-cells busily engaged in tearing them open. I now feel that I can introduce virgin queens successfully; and in the foregoing I have told the reader how I do it.

Borodino, N. Y.

For the American Bee Journal.

**Building up Colonies in the Spring.**

JAMES M'NEIL.

I desire to give the result of an experiment made in building up colonies in the spring. Mr. Doolittle says: "Beginning about May 1, shift the frames of brood and put the frames of honey or syrup in the centre of the brood-nest every week for the following six weeks." Mr. Heddon says: "Do not manipulate the frames at all. The bees will extend their brood-nest as fast as it is desirable." When such notable authorities in the apicultural world disagree, the novice must hold the weight of opinion in an even balance until he shall have experimented for himself. This I have done, and I throw the weight of my authority, whatever it may be, into the Doolittle scale. I selected 20 colonies, estimated very carefully the amount of brood in each, and then divided them into two equal lots; I ran one lot on the non-stimulating plan of Mr. Heddon, and the other lot on the brood-spreading-and-stimulating plan of Mr. Doolittle.

My observations were made at two different times, May 10 and June 2. Between these dates, 3 weeks and 1 day, the colonies run on the Heddon plan made an average gain of 1½ frames of brood; those run on the Doolittle plan, 2 13-20 frames. Had the experiment covered the period of 6 weeks, the contrast would, of course, have been greater. I keep my bees in their winter packing till the middle of May, which allows them to spread brood, with less risk, before settled warm weather is assured.

Mr. Doolittle, in his directions, makes no account of fruit bloom. Perhaps he does not live in a fruit-growing region. In this section,

stimulative feeding is unnecessary from about May 8 till the 26. By implicitly following Mr. Doolittle's directions, I had my bees swarming during fruit bloom last year; and frames partly filled with honey, placed in the centre of the brood-nest, were completely filled from the abundant flow of cherry bloom.

This year, in the beginning of apple bloom, I put upper stories on the hives containing the strongest colonies; and they stored in them, on an average, from 20 to 25 pounds of honey. I have never seen a more abundant apple bloom; and for 4 days the weather was delightful, so that the bees could work from daylight till dark. The general June honey-flow began in good earnest to-day.

Hudson, N. Y., June 7, 1884.

For the American Bee Journal.

### Wintering—Bee-Diarrhoea.

WARREN PIERCE.

As the above subjects are still being discussed, I wish to offer a theory, for the consideration of the bee-keeping fraternity, based, principally, upon the ventilation-theory to which I called attention in the BEE JOURNAL several years ago, but which is only just now becoming popular.

It is a well-known fact that carbonic-acid gas is extremely poisonous; but it is not as generally known that it is heavier than air, and may be poured from one vessel into another almost as readily as water, and evaporates very slowly. In the case of a colony of bees confined to a close hive, it is a case of slow poisoning, which, if not too long continued, is readily cured by a flight, and not so much by the voiding of feces as by the purifying effects of the air. But if no opportunity for flight occurs, and the gas is not permitted to escape, the poisoning continues until the result is fatal.

Diarrhoea is frequently attributed to late-gathered honey. I am aware that in some localities poisonous honey is gathered, but I think it a mistake to charge it with as much mischief, as many are doing, for want of a better reason for the disease.

In June 1881, I gave my views, through the BEE JOURNAL, on ventilation; and in that article I mentioned the case of two colonies in my bee-yard where one had nothing but the best white clover honey, and the other only late-gathered honey. The colony having the best honey died of a bad case of diarrhoea, while the other came out bright and clean. Both were on the summer stands. The one which lived had been carelessly left with the back-stop of the hive out, thus leaving an opening  $\frac{3}{8}$  by 14 inches to the west.

Now, what are the evidences that carbonic-acid gas is the greatest enemy to successful wintering? That a colony of 30,000 or 40,000 bees must produce it in large quantities cannot be doubted; and if it does not pass away freely, it must act as a slow poison.

We have the testimony of bee-keepers

who are successful by reason of giving large bottom-ventilation which allows the gas to pass off freely; the testimony of those depending upon top-ventilation which admits pure air to the cluster and assists in driving out impure air below; the claims of those who use deep hives on account of better wintering qualities, giving as they do, more room below the cluster for the dense gas to settle; the well-known superiority of the old box-hive, on account of its depth, frequently combined with unlimited bottom-ventilation; the bee-tree, the cavity of which usually has the form necessary to safety; and lastly, perhaps, by the fact that brief confinement in any weather will produce an effect similar in appearance to diarrhoea. I have no faith whatever in the "pollen theory;" none in the "moisture difficulty" which cannot be remedied by proper ventilation; and but very little in the "poor honey theory."

I believe that ample protection is necessary, if wintered on the summer stands, and would either have a two-story hive with the cluster in the upper one, or a large opening in the bottom-board, and a box without a cover for a stand. If bees are wintered in the cellar, the bottom-board of the hive should have a large opening, or be removed entirely, and wire cloth substituted.

The hives should be placed as far up from the cellar-bottom as possible, especially if the number of colonies is large, for the same reason that I would use a two-story hive. A recent number of the BEE JOURNAL gives the experience of one of its correspondents who found that the bees which were the nearest to the cellar-bottom, were the *most* diseased, and those which were nearest the top of the cellar, were the *least* diseased.

Garrettsville, O.

For the American Bee Journal.

### Wintering Bees in Cellars.

IRA BARBER.

I notice on page 356, that Mr. Doolittle has met with heavy losses of bees, on a new plan of wintering. My sympathy is with the dead bees, and not for Mr. Doolittle; for, in my opinion, any man who originates a plan of wintering bees, and fails to make a success of it, should not try to make it appear that his plan was substantially the same as the one practiced by me for more than 20 years without a failure.

He used a cold cellar built in a side-hill, and depended on coal-oil to furnish heat; while the plan which I have practiced, requires a warm cellar under a dwelling-house, and one which never froze when bees were not in it.

Mr. D. says that he found, by my reply to his letter, that I knew but little about the matter, as I used a thermometer only when the bees were put in and when they were taken out; and at such times the bees were agitated, and would raise the tempera-

ture. The tests of degrees of heat given were 12° above zero, outside, and 65° inside, 24 hours after the room was closed; and that of 60° outside and 90° inside were taken before a colony was carried out, and when the cellar was first opened. I should make tests oftener if I lived where the cellar is; but as my home is 20 miles from it, I did not propose to ride that distance, on extreme cold days, to test the degree of heat the bees were keeping up. He says that the mercury might fall to 40° below zero and stay there the most of the winter and I not know it. I am not located near enough to the north pole to have the mercury remain at 40° below zero nearly all winter; while the fact is, the mercury seldom, if ever goes so low in the coldest places in the open air; and that for only a few hours at a time.

Does Mr. Doolittle, or any intelligent bee-keeper, believe that a frost-proof cellar without bees would be in any danger of getting too cool for safety when filled with bees? The same week that I received Mr. D.'s letter, several other parties wrote to me asking the same questions that Mr. D. did; but this case is the first that I have heard of coal-oil being used to generate heat sufficiently to warm bees.

Mr. D. says that on Jan. 1 his bees were all right; but was surprised to find them active. What would he have done if he had seen my bees on March 24, when no part of the hives could be seen; for all that could be seen was piles of bees 5 feet high, or rather, walls of bees; for they were all from top to bottom and lengthwise of the rows of hives. All the damage done to them was the mixing up of Italians and hybrids, and they never saw a day, while in winter quarters, that the mercury was as low as 50° above zero.

Again, he says that the bees were 2 inches deep on the cellar-bottom on March 1. I fill the cellar full of hives, on my plan, and there is no cellar-bottom left to be covered with dead bees; and if any get tired of staying at home, they can step in to the next door neighbor and be received as a welcome guest.

He says that bees died of old age in winter quarters. What can he offer as proof of the assertion? In my experience in examining dead bees found in winter repositories, I have never seen any evidence of old age among the dead. The down or hair on their bodies was as bright and fresh as we find it on bees 3 or 4 weeks old; and the wings were in perfect shape, showing plainly that they had not been used to any extent. Bees in this locality often cease breeding quite early in August, and winter just as well as when breeding is kept up until Oct. 1.

Mr. D. asks if there is any conditions in nature, unaided by man, which will confine bees for several months in so high a temperature that moths will mature. My answer is: A warm cellar well filled with colonies of bees, will naturally furnish all the heat required to mature the moth



larvæ to the perfect miller, right on the outside of the hives; and the bees will come out in fine condition.

DeKalb Junction, N. Y., June 9, 1884.

For the American Bee Journal.

### Docility of Syrian Bees.

R. J. KENDALL.

On page 362, Mr. Hewitt, of Sheffield, England, takes exception to my remarks on page 108, regarding a communication of his in the *British Bee Journal* of Jan. 15, relating to the docility of Syrian bees.

I am sorry if I misunderstood and misconstrued what he said; but the two articles are before the public, and I shall not discuss them further. Any one can see for himself how far I went wrong. I am glad, however, of Mr. H.'s letter, because it exactly agrees with my ideas; for in sum and substance it really amounts to saying that Syrians are no more docile than Italians, when you get down to bed-rock.

In Mr. H.'s complaint as to the wrong use of the word "Briton," I think he is also striking at me, not at the Editor, as he (the "Ed.") seems to think. I designated Mr. H. as a "Briton;" the Editor merely used the word "British." The difference between the two may be the difference between tweedle-dum and tweedle-dee. It is not very important, but Mr. H. thinks it enough to lecture one of us on, and at the same time to show that we, on this side of the Atlantic, are ignorant (?) of national derivatives. I have frequently noticed in the *British Bee Journal* this tendency to exhibit a depth of pedantic knowledge of no practical use.

But now in regard to these words, "Briton" and "British." In their original and earlier sense the words were used, doubtless, to designate the semi-barbarous race of people who inhabited "the tight little Isle" prior to the Saxon conquest; but in their later and common acceptance, it is equally sure that they are used to designate the natives of Great Britain—and this latter acceptance is equally as valid as the former. Mr. H. must remember that it is not Americans who gave the name of "Briton" to Englishmen, but Englishmen themselves.

I want to ask Mr. H. a question or two: Between you, me, and the Wicker, will you tell me how many times after, or at, a Good Friday excursion to Conisbro Castle, a Whit Monday trip to Roche Abbey, a picnic in Norfolk Park, a run-over to see "t Leger" on Doncaster Town Moor; or a political meeting in the old Pot Market, or the Albert Hall, have you expanded your lungs by affirming with great vehemence that "Britons never, never, NEVER shall be slaves," "Britons' Strike Home," and like patriotic songs about "Britons?" When you sang those songs, who were the "Britons" referred to—the dead-and-gone, before-the-Saxon-conquest braves, or yourself and countrymen now living?

If you will take your Nuttall's Dictionary, I think you will find that it says, a "Briton" is a native of Great Britain," as, of course, he is; and any English school-boy will give such an answer every time. The English papers claim to be, and are included in "The British Press." Are they not eternally telling us about "British Interests in India," and other parts of the world? Do we not read, every little while, of the "British Troops" doing this and that? Have we not read, or heard of "The British Soldier" and "The British Tar?" and even to-day there are lots of schools in England called "British Schools." Why, their second national song is called, "Rule Britannia;" and next to "God Save the Queen," this song is the dearest to the hearts of Englishmen.

I would recall to Mr. Hewitt's remembrance that well-known song, "The Englishman"—note the title, "The Englishman." The first line of one verse begins:

"The Briton may travel from the pole to the zone, etc."

and the verse ends:

"'Tis a glorious charter, deny it who can,  
That breathes in the words, I'm an Englishman."

What becomes of Mr. Hewitt's assertion that the word "Briton" cannot properly be applied to an Englishman? Again, it is news to me to hear that either the natives of "Cyprus, Canada, Hong Kong, India, Jamaica, etc.,—in fact people of all colors—are Britishers." The direct contrary is true; they are not Britishers. There may be people living there who are Britishers, but they were born in the British Isles or of British parents if they are. If Mr. Hewitt's bee-ology is no better than his ethnology, I am afraid we cannot depend upon it.

Austin, Texas.

For the American Bee Journal.

### Prevention of Bee-Diarrhœa.

J. E. FOND, JR.

On page 374 Mr. Fradenburg says: "I have read with much interest the articles on bee-diarrhœa. But all have been theories and no proofs." "Now," he says, "I will give the proofs first and the theories afterwards;" and then states further: "My proofs are sustained by 59 living witnesses." But what do his proofs prove after all? Certainly not that pollen is the cause of bee-diarrhœa, but simply that in the cases he mentions, no diarrhœa was found when sugar syrup was used for winter stores.

Per contra, I will give some proofs; true, I have but 9 living witnesses, but they will certainly give one-sixth as much proof as Mr. F.'s 59. Last fall, when preparing 9 colonies for winter, I allowed all the pollen left over to remain in the hives; the result was, that not one of these colonies showed a sign of diarrhœa, and I never saw bees in better condition, or recruit up faster than these 9 colonies did, this spring. One of them, in fact, gave me 72 pounds of surplus honey from apple bloom, gathered in five days.

This proves nothing in itself, but it certainly is as strong proof as that given by Mr. F. If, however, it does prove anything, it goes far toward proving that pollen is not the cause of bee-diarrhœa; for if it is, my 9 colonies would have been affected with that disease.

The fact is, we must all of us look further yet, for the cause; when found, there will be a general rejoicing all through the land.

I am satisfied that I have found the solution of the wintering problem, and in a future article, will give my ideas. For the present I hope that every bee-keeper will do his part toward ascertaining the cause of bee-diarrhœa, and he who first discovers it, will receive the heartfelt thanks of his grateful brethren.

Foxboro, Mass.

For the American Bee Journal.

### Profitable Use of Comb Foundation.

W. H. STEWART.

Although I have kept bees nearly every season for the last 40 years, and have all the while striven to learn all that I could of their nature, wants and habits; yet, after becoming somewhat acquainted with the many good lessons on modern bee culture, as given in the bee-papers by Mr. G. M. Doolittle, I feel that he is capable of teaching me very much which I have not yet learned. And, notwithstanding his superior judgment and keen powers of observation, I must say that I am quite sure that the doctrine (or a portion of it) taught in his article on pages 671 and 672 of the *BEE JOURNAL* for 1883, is unsound.

Though Mr. D. seems to express the wish that the article above mentioned should be allowed to pass without criticism, when he says, "If any think that it is not the right way to work, they can pass this article by, the same as if it had not been written;" yet I propose to review the article in part.

The first mistake which I notice in Mr. D.'s remarks is, "Many cannot afford to buy it (foundation)." I hold that no person can afford to keep bees at the present stage of the art without buying or making all the best improved appliances which have been discovered, and put them into profitable use. We might as well conclude that some persons who keep horses could not "afford to buy" oats or corn for feed. I cannot conceive of any reason why a bee-keeper could not "afford to buy" foundation, unless it is because he is poor; and if poverty be offered as an excuse, I would reply that no poor bee-keeper can afford to put up with a small yield of honey, when he could in any proper way get a larger yield, and at a less cost than the market value of the honey.

One of the most happy facts connected with bee-keeping is, that those having but limited means and only a small patch of ground, may engage in the pursuit on a small scale, and by proper management, obtain good re-

turns in proportion to the outlay. Yet another fact, and not so "happy" as one is, that those who engage in the business, and neglect the bees in their wants, are very sure to lose all the time and money which they invest.

Mr. D. states that in order to secure straight combs in the brood frames, he has "found a guide of some kind an absolute necessity." And, although he recommends the plain strip of wax "on the under side of the top-bar of the frame . . . as being the best," yet he admits that his choice of a guide is a practical failure; for he states in the very next sentence that he has "found that no guide can always be depended upon, as the bees are sometimes very obstinate, and will leave the guide so as to build crooked combs, if they do not go directly across the frames."

Mr. D. starts out in his article by stating a truth; viz: "To have all our combs built true, in the frames, so that each comb is as true as a board, is *certainly worth working for*;" (the italics are mine) and now, as he admits that his kind of a comb-guide is sometimes a failure, he has virtually admitted that it will pay to try some other; and he cannot claim that he has thoroughly tested good sheets of foundation; for he says, "I have never used 10 pounds of foundation in brood frames since I have kept bees." It seems rather strange that Mr. D. should assume to set himself in judgment against an article so highly recommended and so universally used as is comb foundation; and then with the same dash of his pen, write that he had never used 10 pounds of it; which is virtually admitting that his opinion in regard to the matter, is of no practical value whatever.

Prof. A. J. Cook, in his "Bee-Keepers' Guide," page 208, in speaking of the usefulness of comb foundation, says: "The most promising use of foundation, to which there can be no objection, is in the brood-chamber. It is astonishing to see how rapidly the bees will extend the cells, and how readily the queen will stock them with eggs if of the right size, 5 cells to the inch. . . . The advantage of foundation is, first, to insure worker comb, and thus worker-brood; and second, to furnish wax so that the bees may be free to gather honey." Mr. D. thinks we "cannot afford to" do this.

"Prof. Cook also says: 'We proved in our apiary the past two seasons, that by the use of foundation, and a little care in pruning out the drone-comb, we could limit, or even exclude drones from our hives.'" Mr. D. says that all colonies having straight worker combs will be "profitable." I have owned several foundation mills, and have made several different kinds myself; and have used much of different kinds of foundation for several years. I have tried the experiment thoroughly with 100 colonies, which Mr. D. recommends in his closing remarks, and from actual and thorough experiment, I do know that it would pay me to purchase foundation at \$2 per pound rather than to do without it.

Again, Mr. D. says that he hives his swarms on 9 frames (Gallup frames of course, as he uses that kind), and in 2 days he opens the hive and finds that the bees have made a start in 5 frames. Why! Mr. D., a good, new colony of bees and only "a start" in 5 frames in two days? If you will come to see me work, this season, I will show you that such swarms as I put on 10 frames, each nearly full of foundation, will, in 2 days, have all of them  $\frac{3}{4}$  finished, and 5 of them complete.

Again, let me suppose that the weather is such that you cannot go through those new colonies until the fifth or sixth day, and then if you find that the colony had turned out to be one of that "obstinate" kind which cuts down the guides and builds the combs across the frames,—how much would you lose in the operation? Do you not think that in that case it would have been good economy to have put the swarm on frames well provided with foundation?

A wise and careful bee-keeper would not be apt to so manage as to lose from 2 to 6 days' work of a new colony in the time of a good honey flow; and that is just the time that swarms are cast. I have often put swarms on 10 frames as nearly full of foundation as the bees could work them to advantage, and in examining them 6 days afterward, I found every frame full of comb, every comb complete, and but a few cells that did not contain either brood, eggs, or honey. Let me say, also, that in all which I have used foundation, I have never known a colony of bees to build combs in a different direction than that in which the foundation was put in for them. It is true that if the sheets of foundation are so placed in the hive that the distance between them is too great, then the bees will be very likely to build thin sheets of comb between them. It is also true that some kinds of foundation, if put in nearly large enough to fill the frame, will, many times, sag and warp while the bees are working them out. Mr. D. says: "It pays the apiarist to look at each colony hived on empty frames, while they are building combs, as often as once in three days. If any combs are found going wrong, they can be bent back in line very easily." I would like to have Mr. D. tell us whether a comb a little out of a true plane built on comb foundation, is not as "easily" straightened as is one built after one of his favorite comb-guides?

I have had several thousand combs built on foundation, and I do not now remember that I ever found one, when finished, so badly warped as to spoil it; and I have never examined a colony for the purpose of straightening the combs; I pay no attention to that work until I have the combs out for some other purpose.

Mr. D. says that until he is better satisfied that comb foundation pays, than he has been from past experiments, he expects to build all his combs in the future, after the plan which he has given. I would like to ask Mr. D. how he expects to become

better satisfied that comb foundation pays while he refuses or neglects to give it a full and fair trial?

Mr. D. states that he would like to have all the "advocates of foundation" try an experiment, as given in his closing remarks, and see which of the two colonies comes out ahead. I would like to have Mr. D. try 2 or 3 swarms hived on a full set of Gallup frames, half of those frames furnished with 2 sheets each of foundation, and each sheet  $2\frac{3}{4}$  inches wide and 3 inches deep. This would leave a little open space between the sheets in the centre, and also between their outer edges and the end-bars (these sheets, 6 square feet to the pound, will give good results). Furnish the other half of the frames with his simple wax-guides, and hang those furnished with foundation in one end of the hive, and the empty frames in the other; then open the hive every day until all the combs are complete, and see which progresses the fastest from first to last, and also where the most eggs are deposited from first to last.

Try another swarm on like furnished frames, hanging those with and those without foundation alternately through the hive, and then examine them daily as above. Notice in the latter also, whether he does not succeed as well in securing straight combs, and in the right direction, in his empty frames as he would if he had hung them between full combs. And finally, will Mr. D. tell us how large young-swarms he gets down there in Borodino? I would laugh to see him crowd a good colony of bees up to the capacity of 5 Gallup frames after being hive 2 days here in Wisconsin.

Orion, Wis.

For the American Bee Journal.

### Overstocking a Locality.

W. F. KANZLER.

1. All persons have the right to keep bees on their own premises.

2. If a man has an aversion to bees and bee-stings, he will not keep bees.

3. Any man who likes bees and their handling, will keep as many colonies as he can profitably care for.

4. No man knows overstocking by his own experience—concerning the number of colonies; for if he keeps a certain number of colonies, he, at the same time and place cannot keep a lesser or higher number. For instance: If he keeps 20 colonies, he cannot keep 5, 100, 200 or 300 colonies at the same time in his yard; neither can he know what these 5, 100, 200 or 300 would yield in the same season; but he knows only the yield of his 20 colonies.

5. Therefore, if we cannot prove overstocking, by our own experience, we can only speak of it by guessing at it—it is nothing but guess-work, or an imaginary evil.

6. In a good season my bees will produce as good an average as my neighbor's; i. e., provided we both have the same skill, hives and strains of bees; regardless of the number of colonies.



7. In a poor season, when bees do not gather enough honey for winter, I must feed my colonies, and my neighbor must do the same thing or kill his bees; and my yard is overstocked if I have only one colony.

8. Therefore, my neighbor cannot lower my average in honey, but the season can.

9. The expression, "bees can graze a field," is wrong; for bees have no teeth like a sheep or cow, and cannot eat the whole plant at once, but they will only sip the sweets out of the blossoms and other parts of the plants; while those plants grazed off by animals, require several days, and perhaps weeks, to give another nourishment. Therefore, we can overstock a clover field with sheep or cows, but not with bees.

Fulda, Ind.

## SELECTIONS FROM OUR LETTER BOX

### Bees are Busy.

The colonies which were wintered in a dry and well ventilated cellar, in this locality, came out strong in bees in the spring. I have 100 colonies, and had the first swarm of this season on May 27. There is plenty of white clover, and the bees are busy.

DAVID ROWE.

Lime Ridge, Wis., June 16, 1884.

### Increased Experience.

I wintered 110 colonies on the summer stands without loss. In the spring I found 2 of which were weak, and I doubled them up. I lost one by robbing. Bees are doing well, and have stored some very nice section honey. Financially, I am ahead on last season's crop, and also have added some experience.

JAS. MCCONNELL.

Clay Village, Ky., June 12, 1884.

### Use of Comb Foundation.

When I wrote to the woman spoken of in my last article, I told her not to be ashamed of her ignorance, but to live up to all the light she had, and more would come to her. I told her that comb foundation is made of bees-wax; that a few enthusiasts thought they could make it of paraffine, but it all melted down in a heap, and they did not try it again; also, that it is made on a little machine something like a clothes wringer; and that it is good to use in bee-hives for the following reasons: 1. It saves wax, as bees are said to consume from 16 to 20 pounds of honey in making a pound of comb. If the comb foundation is furnished them ready for use, it saves them a lot of honey and a great deal of time. 2. It enables one to have all worker-comb in the hive. 3. It compels the bees to build straight combs. I told her that I thought the Italians are the best race of bees out; and that the only moth-trap in the world,

is a strong colony, and that they would attend to the moths. I informed her that the honey-board was formerly used directly over the brood-nest; that it is an article made of wood; and that it is now superseded by a piece of Indian-head muslin the size of the hive, and laid on next to the bees. I told her that the very first thing for her to do is to get movable-frame hives and put her bees into them, so that she could see what they were doing at all times.

MAHALA B. CHADDOCK.

Vermont, Ill.

### North, East, West and South.

The BEE JOURNAL does its advertising wonderfully well. It brought to me responses from Canada to the Gulf of Mexico, and from the Alleghanies to the Rocky Mountains.

WM. M. ROGERS.

Shelbyville, Ky., June 12, 1884.

### Swarm Separators.

In making a swarm separator, as described by Mr. Secor, on page 380, do the division-boards extend to the bottom-board, and as near to the top-board as the frames; viz:  $\frac{3}{8}$  of an inch? If not, how will bees separate if the separator fills the hive flush on all sides? I wintered my bees in a cellar, and they all were strong quite early this spring. Fruit bloom is abundant. I took 75 pounds of honey from 3 colonies—25 pounds each—last week. As yet, I have had no swarms, and I do not want any before June 20. There are about 120 colonies within a radius of a mile here. Will we soon be overstocked? T. F. KINSEL.

Shiloh, O., June 16, 1884.

[Will Mr. Secor please reply to the above? There is not much danger of overstocking the radius of a mile with 120 colonies.—Ed.]

### Heavy Bloom.

We are having a fine honey flow, and have had a heavy bloom of locust and tulip. Now we have white clover in abundance. On yesterday morning the leaves of the grape vines, chestnut and oak trees were fairly glistening with honey-dew.

W. E. STATHERS, M. D.

Middlebourne, W. Va., June 11, 1884.

### What do we Know?

I have been studying bee-lore for 15 years. I have formed theories, planned hives, frames and sections, and have built for my own use a good circular saw. I have made my own hives, etc., etc., and yet I find that I am absolutely an old-fashioned know-nothing. I have read Mr. Root's and Prof. Cook's bee-books, and the BEE JOURNAL; and I find that all of these authorities are at sword's points, and that all the correspondents of the bee-papers are as opposite in their opinions and practices as it is possible to be. I have looked in vain for some one person whom I could follow with a certainty of success, and as

freely as I would a teacher of any of the common branches of human knowledge. I have learned one thing of which I am certain; i. e., that bees will sting; though I do not think I have learned that as thoroughly as some others have. I wish that some one would brimstone all these quarrelsome writers, editors, novices, etc., etc., and let the "fittest survive" to teach the "young idea how to shoot." Stop quarreling, write sense, and the common sort at that, and the moment any writer cracks up any hive, which is not as simple as a hollow tree, charge him 5 dollars a line for inserting his valuable foolishness.

S. RUFUS MASON.

Purple Cave, Neb., June 10, 1884.

### Unripe Extracted Honey.

The BEE JOURNAL for 1883 says: "The sale of extracted honey is dull on account of too much unripe honey on the market." In the first place, who puts this unripe honey on the market? It must be beginners or some who are trying to spoil the sale of extracted honey, or trying to see how much honey can be produced by one colony of bees. When the combs are sealed  $\frac{3}{4}$  of the way down, they are ready for the extractor, and no sooner. My bees came through the spring in fine condition. I have had 6 swarms, and my hives are full of honey and bees. I have the Syrians, and I believe that in 5 years' time they will stand at the head of all races of bees. I hived a swarm 8 days ago, and they have their 8-frame Langstroth hive full of combs and brood; and there is no comb foundation in the hive either. Colonies which have not swarmed, have their combs sealed fully  $\frac{3}{4}$  of the way down. The temperature at which I keep my cellar for wintering bees, is 38° to 45°.

FAYETTE LEE.

Cokato, Minn., June 7, 1884.

### Queen Rearing.

I bred, last year, from fine young queens reared last year, young queens which almost all proved fidgety little queens, and very shy. Their workers died to a great extent, during the winter, and the colonies fizzled out this spring. I have reared, this season, of the same queens, the finest queens I ever saw, and the most prolific ones, and I have come to the conclusion that it is as poor policy to rear young queens of queens reared the same season. I wish, through the medium of the BEE JOURNAL, to hear the opinions of the bee-keepers who are not queen-breeders, as to their experience and opinion in this matter. If my opinion is correct, queen-breeding from a young queen reared the same season, would be as bad a policy as in-and-in breeding, and perhaps worse, and to ascertain this fact would be of importance to apiculture. GUST. MURHARD.

Portland, Oreg.

The Southwestern Iowa Bee-Keepers' Association, will meet in Corning, June 28, 1884.

W. J. OLIVER, Sec.

**Local Convention Directory.**1884. *Time and place of Meeting.*

- Oct. 11, 12.—Northern Mich., at Alma, Mich.  
F. A. Palmer, Sec., McBride, Mich.
- Oct. 15, 16.—Northwestern, at Chicago, Ill.  
W. Z. Hutchinson, Sec.
- Nov. 25.—Western Mich., at Fremont, Mich.  
Geo. E. Hilton, Sec.
- Dec. 3.—Southeastern Mich., at Adrian, Mich.  
A. M. Gander, Sec.
- Dec. 10, 11.—Michigan State, at Lansing.  
H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

**What and How.**

ANSWERS BY

*James Heddon, Dowagiac, Mich.***Transferring Bees.**

1. How can I transfer bees from the box-hive to movable frames?
  2. When is the best time, with a view to increasing the number of colonies?
- J. F. McMILLAN.  
Strawn, Ill., June 5, 1884.

ANSWERS.—1. By the method given on page 367 of the BEE JOURNAL for 1883; a repetition of which would be too long for this department.

2. For either purpose I should prefer the time just before or just at the commencement of swarming.

**Prevention of Swarming.**

I stored 19 colonies in the cellar last December, and took them out on March 10. One late swarm starved, but the rest were strong in numbers, and had used but little honey. Some colonies show signs of swarming. I do not want more than one swarm from each colony. Where will the queen-cells be most likely to be built? I shall have to find and destroy them to prevent after-swarms.

G. C. BILL.

Plainfield, Ill., June 9, 1884.

ANSWER.—I do not like your plan of prevention of increase. See page 126 of the BEE JOURNAL for 1883. You will be obliged to carefully scan every portion of all the combs in the hive.

**Reversing the Frames.**

Speaking of reversible frames, the question is often asked, "How about the cells, which have an upward inclination, and when reversed, will pitch downward, will the bees change this, or is it not necessary for brood-rearing?"

C. G. BEITEL.

Easton, Pa.

ANSWER.—I do not consider any change in the pitch of the cell necessary. On page 392 Mr. Baldrige speaks of this. Here we have had eggs, larvæ and pupæ in a perfect state of development, in combs laying flat on their sides. It seems that Mr.

Baldrige has had the same experience regarding vertical cells. We find that bees invariably (without guides) build their cells horizontally, and never vertically. We also find that when we give them foundation with vertical rows, no injury or drawback is realized. The Dadant foundation is made in that way, I believe. Many think that we must follow the "wisdom of nature;" but if we do that, we will find the greatest portion of such wisdom in the brain of man, and by crossing lower instincts in accordance with reason, is the great and useful work of science.

**Chickens and Bees.**

One of my neighbors had a brood of chickens that were in the habit of frequenting the shed in which he kept his bees. The bees stung all the dark-colored ones to death and did not molest the light-colored ones. Why this preference? I am well pleased with my success. My bees have wintered on the summer stands.

Pioneer, O.

JOHN DYE.

ANSWER.—Several times, through the BEE JOURNAL, I have spoken of the advantage of wearing light clothes among the bees. We wear black bee-veils because we cannot see clearly through any other color. Woolly, fuzzy and dark materials are objected to by bees. A man with a plug hat on rarely gets stung, unless by a bee that in trying to "shoot the hat," aims too low, and hits the face by mistake, while a companion at a suitable distance is perfectly safe.

**Very Small Bees.**

Enclosed please find 4 bees. Will Mr. Heddon please state their name and occupation? They are small, and I find them at the entrances of my hives. The other bees do not try to sting them, but will catch and fly away with them, but they soon return, flying clear into the hive. In a few minutes they appear on the alighting-board. They are very quick, and jump at almost every loaded bee that comes, until it is taken out for another ride. I find some of them at almost all of my 30 hives, but more at some of the Syrians.

Oregonia, O. W. C. STEDDOM.

ANSWER.—This case is entirely outside of any of my experience or observation. The sample bees appear to be of the yellow-banded variety, and quite handsome little fellows, but very, very small. It must be a case of peculiar abnormality, but is more of an enigma than I can solve.

**Use of Honey from Diseased Bees.**

If bees die of diarrhoea in the winter and leave the combs full of honey, will this honey injure a swarm if given to it?

C. W. BRUNER.

Bascom, Ind., May 31, 1884.

ANSWER.—I have no fears in giving such combs to swarms. Whatever the combs did contain when the old colony went into winter quarters to

die, or whatever they may contain after their demise, the swarm will replace with food of the season in which they are hived. This is a rule, with very few exceptions; but not where the hive is constructed upon correct principles, and the swarm contains a vigorous queen.

**Honey and Beeswax Market.**

OFFICE OF THE AMERICAN BEE JOURNAL.  
Monday, 10 a. m., June 24, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

**CINCINNATI.**

HONEY—The demand for all honey is very slow; market dull and prices range from 6@9c for extracted. Different lots of choice comb honey in small sections have been offered and sold in our market lately at 12@14c per lb. As I predicted some time ago, the preference for the production of comb honey seems to be prevalent; and, as we have the best prospects for an abundant harvest this year, we may prepare for low prices.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival. CHAS. F. MUTH.

**NEW YORK.**

HONEY—Present quotations are as follows: Fancy white in 2-lb. sections, glassed, 13@14c; fair to good in 2-lb. sections, glassed, 11@13c; dark grades in 2-lb. sections, glassed, 10@12c. No 1-lbs. in this market.

BEESWAX—Scarce, and sells readily at 36@38c. MCCAUL & HILBRETH, 34 Hudson St.

**BOSTON.**

HONEY—The sale of honey is almost over, and we are obliged to sell 2-lb. combs for 15c, and 2½-lbs. to 2¾-lbs. from 10@12c. No 1-lbs. in the market. Extracted, 9@10c.

BEESWAX—35c.

BLAKE &amp; RIPLEY, 57 Chatham Street.

**CHICAGO.**

HONEY—Choice white comb honey in 1 lb. sections brings 18c; in 1½ to 2 lb. sections, quotable at 16c. Comb honey discolored and in undesirable shape is selling at 10@12c. Extracted honey is in light demand at 8@9c. Manufacturers of syrups and bakers say that the low price of sugar is the reason why they do not use as much honey as formerly. There is very little desirable comb honey on the market.

BEESWAX—Is scarce and fancy yellow brings 38c. Good beeswax, but dark, and having more or less of refuse matter in it, quotable at 37@38c.

R. A. BURNETT, 161 South Water St.

**SAN FRANCISCO.**

HONEY—Offerings are mostly of ordinary quality, especially so of comb. The demand is very light. Sales of candied extracted are quoted at 5c. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 6½@7c; dark and candied, 4@5c.

BEESWAX—Wholesale, 27@30c.

STEARNS &amp; SMITH, 423 Front Street.

**KANSAS CITY.**

HONEY—Nothing doing now in comb honey, except in a very small way, and will not likely be until the new crop comes in. I quote choice white nominal, at 14½@15½c. Dark and irregular, no sale at all. Extracted in fair request at 7@8½c. Some new Southern honey (extracted) arriving.

BEESWAX—Nominal, at 30@35c.

JEROME TWICHELL, 514 Walnut Street.

**ST. LOUIS.**

HONEY—Steady; demand and supply both small. Comb, 12@14c per lb., and strained and extracted 6@8½c.

BEESWAX—Firm at 32@32½c. for choice.

W. T. ANDERSON &amp; Co., 104 N. 3d Street.

**CLEVELAND.**

HONEY—The honey market is fairly active on best white 1 lb. sections at 18c; 2 lbs. best white not quite so active at 17c; 1 lb. sections sell quickly on arrival, and often are sold to arrive. Second qualities continue very dull—are hardly salable at any price. Extracted is not wanted.

BEESWAX—Scarce at 35c.

A. C. KENDEL, 115 Ontario Street.

**SAN FRANCISCO.**

HONEY—We quote comb honey in 2 lb. sections, 18@20c; extracted, 7½@8c.

GEO. W. MEADE &amp; Co., 213 Market St.

We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.



## Special Notices.

**Examine the Date** following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for \$5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

**Subscription Credits.**—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter on your label notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a continual statement of account.

**Advertisements intended for the BEE JOURNAL** must reach this office by Saturday of the previous week.

## GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, \$2.00; Monthly, \$1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar they send direct to this office, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and \$6.00, we will make an additional present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with \$10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

## Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages).....\$1 00  
 " 100 colonies (220 pages)..... 1 25  
 " 200 colonies (420 pages)..... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

## Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price still lower, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, \$2.50. 500 will be sent postpaid for \$10.00; or 1000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

## Convention Hand-Book.

It is a nice Pocket Companion for bee-keepers. It is beautifully printed on toned paper, and bound in cloth—price 50 cents.

It contains a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making statistical reports—a Programme of questions for discussion at such meetings—model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs—32 blank leaves for jotting down interesting facts, etc.

We have aimed to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world.

We have had some bound in Russia leather, with colored edges—price 60 cents.

We will supply them by the dozen at 25 per cent. discount, post-paid.

## What they Say of it:

From Prof. A. J. Cook, Lansing, Mich.—"I have greatly to thank you for getting up the exquisite little Convention Hand-Book. Surely the old 'saying' is true—being a thing of beauty, it ought to be a joy forever."

From Mr. A. I. Root, Medina, O.—"Send me—dozen of the Convention Hand-Books. We have had quite a number of inquiries for something of that sort, and yours seems to be quite nicely gotten up, and just what is wanted."

From J. E. Pond, Jr., Foxboro, Mass.—"The Convention Hand-Book is just the thing. The digest of Parliamentary Rules it contains will prove of great value to every one. I trust it will receive the patronage it so well deserves."

From Mrs. L. Harrison, Peoria, Ill.—"The Bee-Keepers' Convention Hand-Book is a gem. It should be in the hands of every one who attends a bee-convention, and then there will be no need of embarrassment on account of ignorance of Parliamentary Rules. Accept my thanks for same sent."

From G. M. Doolittle, Borodino, N. Y.—"I am in receipt of the new Convention Hand-Book, and must congratulate you on the happy thought of such a work, and the neat appearance of the book. It is a work you may well be proud of, both as to the matter it contains, and the splendid material used in its make-up. It will meet a long-felt want; and, were it so that I could attend conventions as in former years, ten times the price would not seem too much to pay for it, for by the instruction therein given, any man could be kept from many a blunder, much to his mortification. I hope in the near future to again be at liberty to go to conventions, when I shall prize the work very highly."

James Heddon, Dowagiac, Mich., writes:—"The Bee-Keepers' Convention Hand-Book is received. I saw it advertised, but conceived no approximate idea of its great value to bee-keepers attending conventions, until I perused it. Many times the price of my copy would be no temptation for me to do without it. It will make us all want to talk at once, I fear. You deserve the thanks of all, and I herewith tender mine for this helper."

The first edition of the "Apiary Register" having been exhausted, we have just issued a new edition, elegantly bound in Russia leather, with a large worker bee and "Apiary Register" in gold on the side. It forms not only a Register of both Queens and Colonies, but has also an Account Book at the back, in which to keep a record of all the receipts and expenditures of the apiary, which will be found exceedingly valuable. We have also reduced the prices, as will be seen on another page.



Several hundreds of subscriptions expire with this number, which completes the first half of the year. We desire to impress all with the importance of *renewing at once*, to save themselves annoyance by the loss of several numbers, and also save us the trouble of removing the names from our type mail-list, and then setting them up again a few days afterwards. Those who desire to have the BEE JOURNAL continued until they order it discontinued, should notify us of the fact, and we will so mark it on the mail-list; then no numbers would be lost or trouble made for any one.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

For \$2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for \$1.75. Or, bound in cloth, with Weekly, \$3.00; with the Monthly, \$2.00.

Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for \$3, or in paper covers for \$2.75. The Monthly BEE JOURNAL and the book, \$1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is \$1.50 bound in paper covers, or \$2.00 when bound in cloth.

THE COUNTESS OF MONTE-CRISTO; being the companion to Alexander Dumas' Celebrated Novel of "The Count of Monte-Cristo," and fully equal to that world renowned novel, is in press, and will be published immediately by T. B. Peterson & Brothers, Philadelphia. It is a work of extraordinary power, fascination and interest, while it is great in plot, incidents and characters.

ALFRED H. NEWMAN,

Dealer in all kinds of

**APIARIAN SUPPLIES,**

AND

HONEY AND BEESWAX,

923 West Madison Street,

CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE  
sent FREE upon application.

**COMB FOUNDATION.**

On account of the prevailing scarcity of beeswax the price of comb foundation is now advanced 5 cents per pound above the price quoted in my Catalogue for 1884. Prices same as Dadant's.

**BEESWAX.**

I pay \$4c. per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

NEW AND USEFUL

**Articles for the Apiary**

Send for our 16-page illustrated Circular.  
18A11 HENRY ALLEY, Wenham, Mass.

**BEE-KEEPERS**, before ordering your  
**BEE APIARIAN SUPPLIES,**  
Send for our large Illustrated Catalogue, sent free to any address.

10A24 E. KRETCHMER, Coburg, Iowa.

**Given's Foundation Press.**

PUBLIC SENTIMENT affirms that the PRESS is SUPERIOR for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,

1AB17

HOOPESTON, ILL.

**BLAINE**

Agents wanted for authentic edition of his life. Published at Augusta, his home. Largest, handsomest, cheapest, best. By the renowned historian and biographer, Col. Conwell, whose life of Garfield, published by us, outsold the twenty others by 60,000. Outlets every book ever published in this world; many agents are selling fifty daily. Agents are making fortunes. All new beginners successful; grand chance for them; \$43.50 made by a lady agent the first day. Terms most liberal. Particulars free. Better send 25 cents for postage, etc., on free outfit, now ready, including large prospectus book, and save valuable time.

ALLEN & CO.,

AUGUSTA, MAINE.



**BINGHAM SMOKERS.**

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including THE CONQUEROR, and THE DOCTOR. Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,

923 W. Madison, CHICAGO, ILL.

**For Bees, Queens.**

Honey, Foundation, Hives, Sections, and all Apiarian Implements, send for Circular to

FLANAGAN & ILLINSKI,

1AB17 Lock box 995, Belleville, St. Clair Co., Ill.

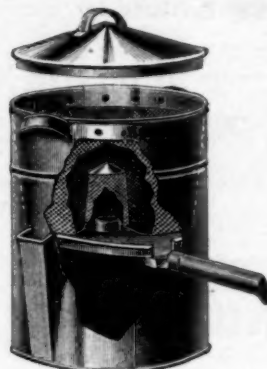
**LOCAL REPORTERS WANTED.**

We want a local reporter in every farming community to furnish us from time to time such facts as we may require. Full particulars regarding services, compensation, etc., will be furnished on application. Address Will C. Turner & Co., Publishers "City and Country," Columbus, Ohio.

24A18T

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

**EXCELSIOR  
WAX EXTRACTOR**



The advantages of this Extractor are:

1. It is more easily operated, there being no necessity for removing the top to refill with water.
  2. It melts quicker, because the wax is brought into a more direct contact with the steam.
  3. It is more economical, because the steam has access to the center, thereby extracting all the wax from the refuse matter.
  4. The filler for water acts also as an indicator as to the amount of water in the boiler, as when the steam escapes through the filler, more water will be required.
- Keep a kettle of hot water ready to fill when required. We make two sizes, the smaller one having a larger capacity than the Swiss Wax Extractor.

Price, small size, \$4.00—large size, \$5.00.

ALFRED H. NEWMAN,

923 West Madison St., CHICAGO, ILL.

**DR. FOOTE'S  
HAND BOOK OF HEALTH,**

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a great amount of information, of the utmost importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

It Costs only TWENTY-FIVE CENTS, and contains 25 pages, and is sent by mail, post-paid, on receipt of price. This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat, How to Eat it, Things to Do, Things to Avoid, Perils of Summer, How to Breathe, Overheating Houses, Ventilation, Influence of Plants, Occupation for Invalids, Superfluous Hair, Restoring the Drowned, Preventing Near-Sightedness,	Parasites of the Skin, Bathing—Best way, Lungs & Lung Diseases, How to Avoid them, Clothing—what to Wear, How much to Wear, Contagious Diseases, How to Avoid them, Exercise, Care of Teeth, After-Dinner Naps, Headache, cause & cure, Malarial Affections, Group-to Prevent.
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IT TELLS HOW TO CURE

Black Eyes, Boils, Burns, Chiblaina, Cold Feet, Coughs, Cholera, Diarrhoea, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Iry Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only 25 Cents. Sent by Mail, post-paid, by

THOMAS G. NEWMAN,

925 West Madison Street, CHICAGO, ILL.

**ELECTROTYPES**

Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. THOMAS G. NEWMAN, 925 West Madison Street Chicago, Ill.



**HELLO! HELLO!**

We are now ready to Book Orders for  
**Bee-Keepers' Supplies.**

White Poplar **SECTIONS** A  
Dovetailed Specialty.

Everything fully up with the times, and  
**At Lowest Figures!**

Send stamp for 32-page Catalogue and Samples.

**APIARIAN SUPPLY CO.,**  
7A6m WILTON JUNCTION, IOWA.

**Dadant's Foundation Factory, wholesale**  
and retail. See Advertisement in another column.

**Vandervort Comb Fdn. Mills,**

Send for Samples & Reduced Price-List.

ABtf **J. VANDERVORT, Laceyville, Pa.**

**GOLD** for the working class. Send 10 cents for postage, and we will mail you free, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to \$5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send \$1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address **STINSON & Co., Portland, Maine.**  
4A1y

**How to Prevent Swarming.**

Send for our 23d annual Circular for particulars.  
18Atf **HENRY ALLEY, Wenham, Mass.**

**FLAT-BOTTOM  
COMB FOUNDATION.**

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

**J. VAN DEUSEN & SONS,**  
Sole Manufacturers,  
Sprout Brook, Mont. Co., N. Y.

**\$66** a week at home. \$5.00 outfit free. Pay absolutely sure. No risk. Capital not required. Reader, if you want business at which persons of either sex, young or old, can make great pay all the time they work, with absolute certainty, write for particulars to **H. HALLETT & Co., Portland, Maine.**  
4A1y

**Dadant's Foundation Factory, wholesale**  
and retail. See Advertisement in another column.

**Muth's Honey Extractor,**

Square Glass Honey Jars, Tin Buckets,  
**Langstroth Bee-Hives, Honey-Sections, etc.**

Apply to **C. F. MUTH,**  
976 and 978 Central Ave., **CINCINNATI, O.**  
Send 10c. for Practical Hints to Bee-Keepers.



37A1y

**THE BRITISH BEE JOURNAL  
AND BEE-KEEPER'S ADVISER.**

The **BRITISH BEE JOURNAL** is NOW published SEMI-MONTHLY, at Seven Shillings, per annum, and contains the best practical information for the time being, showing what to do and when and how to do it. **Rev. H. R. PEEL, Editor.**

We send the **Weekly AMERICAN BEE JOURNAL** and the **British Bee Journal**, both for \$3.50 a year.

**BUY AN  
ESTEY  
ORGAN**

The Best in the World. 150,000 already made. In buying of us or through our Agent, you deal direct with the manufacturer. Write for Catalogue of **ESTEY and CAMP & CO. ORGANS, Decker Bros., Mathushek, Simpson, Estey & Camp, and Camp & Co. PIANOS. AGENTS WANTED.**

**ESTEY & CAMP,**  
188 and 190 State St., **CHICAGO.**

**Bingham Corner. IF YOU WANT****VEHICLE,**

SEND A POSTAL CARD TO THE

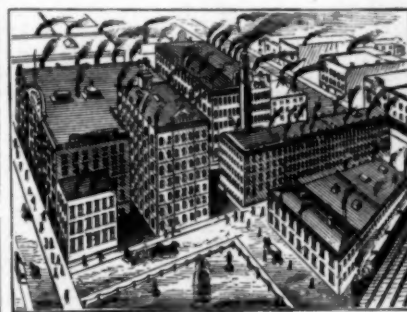
**COLUMBUS BUGGY CO.**

COLUMBUS, OHIO.

When Catalogue and name of nearest dealer, where our **SUPERIOR** Vehicles can be seen, will be sent.

We have the **LARGEST FACTORY** in the world for manufacturing first-class and **SUPERIOR**

**Buggies, Phaetons, Light Carriages, Surrey Wagons,**



AND OUR POPULAR

**American Village Carts,**

the latter most perfect and free from horse motion.

We make our own wheels from the best timber (sawed by our own mills) that can be obtained from the hills of Southern Ohio—famous for the second-growth hickory.

Any of our readers who will inclose 15 cent stamps, in a letter to the **COLUMBUS BUGGY CO., Columbus, Ohio**, will receive in return a beautiful engraving in colors representing an "Australian Scene," and their manner of traveling in that country with ostriches as a motor. 24A18t

**Dadant's Foundation Factory, wholesale**  
and retail. See Advertisement in another column.

**WOODARD'S LANDING, Wash. Ter.**  
**The Best Smoker.**—To **BINGHAM & HETHERINGTON, Abronia, Mich.**, Dear Sirs:—Find enclosed money for 3 Conqueror Smokers, which please send per mail—one to each, **Dr. Balch, J. M. Louderback, and H. A. Townner.** The Conqueror is the best Smoker I ever used. Respectfully,  
May 17, 1884. **H. HASTINGS.**

**DRESDEN, TEX., May 28, 1884.**  
**Conquer the "Cyps."**—**T. F. BINGHAM, Abronia, Mich.**, Dear Sir:—Enclosed find \$1.75, for which please send, per mail, one "Conqueror Smoker" to **Major H. A. High, Waxahachie, Tex.** He bought a Cyprian Queen from me, and the Bees have worsted the old gentleman. I told him that the Conqueror would conquer the "Cyps," as I had tried one for two years, and "it never failed." Respectfully,  
**B. F. CARROLL.**

**BORODINO, N. Y., Aug. 15, 1882.**  
**Cyprians Conquered.**—All summer long it has been "which and tother" with me and the Cyprian colony of bees I have—but at last I am "boss." **Bingham's Conqueror Smoker** did it. If you want lots of smoke just at the right time, get a Conqueror Smoker of **Bingham.** Respectfully,  
**G. M. DOOLITTLE.**

**Prices, by mail, post-paid.**

Doctor smoker (wide shield) . . . 3½ inch . . .	\$2.00
Conqueror smoker (wide shield) 3 . . .	1.75
Large smoker (wide shield) . . . 2½ " . . .	1.50
Extra smoker (wide shield) . . . 2 " . . .	1.25
Plain smoker . . . 2 " . . .	1.00
Little Wonder smoker . . . 1½ " . . .	.65
<b>Bingham &amp; Hetherington Honey Knife,</b>	
2 inch . . .	1.15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address,

**T. F. BINGHAM, P. M., of  
BINGHAM & HETHERINGTON,**

**ABRONIA, MICH.**

**DOUGHERTY & McKEE,**

**Indianapolis, Ind.,**

Manufacturers of and Dealers in **BEE-KEEPERS' SUPPLIES and HONEY.** **Langstroth HIVES** a Specialty. **Dadant's Foundation, Bingham Smokers, Wired frames and Foundation from the Given Press, Sections, Extractors and Honey Jars.** Send for our **Price List.** 14A26t

**THIS PAPER** may be found on file at Geo. F. Howell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

1883. 1884.  
**HEDDON'S**  
COLUMN.

**BEST GIVEN**  
**COMB FOUNDATION.**

Wholesale and Retail.

I now have on hand a freshly-made lot of GIVEN COMB FOUNDATION, made from strictly pure domestic wax, thoroughly cleansed from all impurities. Sizes of brood and surplus,  $8\frac{1}{4} \times 16\frac{1}{4}$ , or Langstroth size. I have also Dadant's best Brood Foundation of same size; also Dadant's 11x11 for American frames. Send for prices, and state amount wanted. I offer a liberal DISCOUNT to DEALERS.

**HEDDON'S LANGSTROTH HIVE.**

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

One Hive complete for comb honey...\$3.00  
(The above will contain two cases complete with sections).

The above Hive complete for extracted honey.....\$3.00  
The above Hive complete for both in one ..... 4.50  
One Hive in the flat..... 2.00  
Five or over, each ..... 1.50

No one should ever order these Hives in the flat, without ordering one made up complete to work by. Parties are advertising Hives as Heddon Hives, that in no wise embrace my principles. Judge only by those purchased from me.

**SECTIONS.**

I am now ready to furnish white all-Dovetail Sections as follows:  $4\frac{1}{2} \times 4\frac{1}{2} \times 6$ , 7 and 8 to the foot, per 1,000, \$6.50;  $5 \times 6 \times 2$ , per 1,000, \$8.00. All shipped from here.

**QUEENS!**

Our New Strain,

Also IMPORTED ITALIANS!

Take your choice. Prices:

Tested, to breed from.....\$ 3 00  
Untested, to breed from..... 1 25  
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